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Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

STEVENS, THOMAS H

ART UNIT	PAPER NUMBER
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2121

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11/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,414	Applicant(s) BRAUN ET AL.	
	Examiner THOMAS H. STEVENS	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-17 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-17 and 19-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/16/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 9-17,19-28 were examined.
2. Claims 1-8 and 18 were cancelled.

Section I: Final Rejection

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 9-17,19-28 are rejected under 35 U.S.C. 102(e) as being Krivoshein by (US Patent 6,449,715; herein Krivoshein). Krivoshein discloses a configuration system for use in a process control network (abstract).

Claim 9. An automated (profibus process automation, column 8, lines 51-63) method for generating program modules (columns 5-6, lines 65-67, 1-16, respectively) for controlling field devices (figure 1, element 12), from a machine-readable parameterized (figure 10, variable values)description of field devices, (profibus process automation, column 8, lines 51-63) wherein the description is used by a control unit (e.g., fieldbus

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master, figure 1, element 44)for controlling the field devices, (profibus process automation, column 8, lines 51-63) the method comprising: providing control equipment in each of the field devices, (profibus process automation, column 8, lines 51-63) wherein the control equipment comprises at least one microprocessor (e.g., PLC, column 8, line 48), at least one electronic storage mechanism (e.g., database, column 34, lines 47-50), and data input (user input, element 74)and output mechanisms for communicating with the control unit(e.g., fieldbus master, figure 1, element 44); wherein the field device(profibus process automation, column 8, lines 51-63) identifies parameters (e.g., figures 20 and 23) of the field device(profibus process automation, column 8, lines 51-63) in the description, identifies characteristics of the parameters (e.g., figures 20 and 23) relevant for control purposes, and automatically generates executable program modules (columns 5-6, lines 65-67, 1-16, respectively) for the control equipment of the field device(profibus process automation, column 8, lines 51-63), which can be executed by the field device's (profibus process automation, column 8, lines 51-63) microprocessor (e.g., PLC, column 8, line 48) and which are based, at least partially, on the identified parameters (e.g., figures 20 and 23) and/or the characteristics of the parameters (e.g., figures 20 and 23) which have been identified as relevant for control purposes: and wherein the field device(profibus process automation, column 8, lines 51-63) measures, positions, records, or regulates an industrial process (suggested that the devices are connected or related to a manufacturing process, column 15, lines 5-20).

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Claim 10. A method in accordance with Claim 9, wherein the control equipment comprises at least one electronic storage data input (user input, element 74) and output means for communications with the control unit (e.g., fieldbus master, figure 1, element 44).

Claim 11. A method in accordance with Claim 9, wherein the identifying characteristics of the parameters (e.g., figures 20 and 23) relevant for control purposes step comprises parameters (e.g., figures 20 and 23) regarding a data type, (module parameters associated with creating parameters, column 19, lines 20-30) size, and allowed values or allowed value range.

Claim 12. A method in accordance with Claim 9, wherein for at least one parameter in the description, the field device (profibus process automation, column 8, lines 51-63) automatically generates a declaration module (deals with the relationship of the floating point, column 6, line 10) in which reserves for the parameter (e.g., figures 20 and 23) a storage segment of the at least one electronic storage mechanism (e.g., database, column 34, lines 47-50), and defines a data type and size, wherein the storage segment is reserved, and the data type and the size correspond to the identified characteristics of the parameter (e.g., figures 20 and 23).

Claim 13. A method in accordance with Claim 12, wherein for at least one parameter in the description, the field device (profibus process automation, column 8, lines 51-63) automatically generates an access module which regulates accesses by

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the control equipment to the storage segment defined for the parameter(e.g., figures 20 and 23) in the declaration module (deals the relationship of the floating point, column 6, line 10).

Claim 14. A method in accordance with Claim 13, wherein the access module instructs the control equipment to execute other program modules (columns 5-6, lines 65-67, 1-16, respectively) when there is an access to the parameter(e.g., figures 20 and 23).

Claim 15. A method in accordance with Claim 13, wherein for at least one parameter (e.g., figures 20 and 23) an input checking module is also generated in the field device(profibus process automation, column 8, lines 51-63) which can be called up by the access module and which, when a parameter is changed, checks whether a new parameter (e.g., figures 20 and 23) value lies within a set of allowed values or within an allowed range.

Claim 16. A method in accordance with Claim 9, wherein an error message is generated in the field device if a parameter value supplied by the control unit (e.g., fieldbus master, figure 1, element 44)does not lie within a set of allowed values or lies outside a permissible range.

Claim 17. A method in accordance with Claim 9, wherein for at least one parameter a naming module (module parameters associated with creating parameters, column 19, lines 20-30)is also generated in the field device, which stores on the at least one electronic storage mechanism (e.g., database, column 34, lines 47-50) a

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name for the parameter, (e.g., figures 20 and 23) and makes it possible to access the parameter (e.g., figures 20 and 23) under this name.

Claim 19. A method in accordance with Claim 13, wherein for at least one parameter (e.g., figures 20 and 23) an input checking module is also generated in the field device, which can be called up by the access module and which, when a parameter is changed, checks whether a new parameter value(e.g., figures 20 and 23) lies within a set of allowed values or within an allowed range.

Claim 20. A method in accordance with Claim 14, wherein for at least one parameter(e.g., figures 20 and 23) an input checking module is also generated in the field device, which can be called up by the access module and which, when a parameter is changed, checks whether a new parameter value(e.g., figures 20 and 23) lies within a set of allowed values or within an allowed range.

Claim 21. A method in accordance with Claim 12, wherein an error message is generated in the field device if the parameter value supplied by the control unit (e.g., fieldbus master, figure 1, element 44)does not lie within the set of allowed values or lies outside the permissible range, as applicable.

Claim 22. A method in accordance with Claim 13, wherein an error message is generated in the field device if the parameter value supplied by the control unit (e.g., fieldbus master, figure 1, element 44)does not lie within the set of allowed values or lies outside the permissible range, as applicable.

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Claim 23. A method in accordance with Claim 12, wherein for at least one parameter a naming module (module parameters associated with creating parameters, column 19, lines 20-30) is also generated in the field device, which stores on the at least one electronic storage mechanism (e.g., database, column 34, lines 47-50) a name for the parameter, and makes it possible to access the parameter under this name.

Claim 24. A method in accordance with Claim 13, wherein for at least one parameter (e.g., figures 20 and 23) a naming module (module parameters associated with creating parameters, column 19, lines 20-30) is also generated in the field device, which stores on the at least one electronic storage mechanism (e.g., database, column 34, lines 47-50) a name for the parameter, (e.g., figures 20 and 23) and makes it possible to access the parameter (e.g., figures 20 and 23) under this name.

Claim 25. An automated (profibus process automation, column 8, lines 51-63) method for generating, from a machine-readable description of field devices, program modules (columns 5-6, lines 65-67, 1-16, respectively) for controlling field devices (figure 1, element 12), which are used on a control unit (e.g., fieldbus master, figure 1, element 44) for the purpose of controlling the field devices, (profibus process automation, column 8, lines 51-63) where each of the field devices (profibus process automation, column 8, lines 51-63) incorporates control equipment with a microprocessor (e.g., PLC, column 8, line 48), with a storage mechanism and with data input (user input, element 74) and output mechanisms for communicating with the control unit, (e.g., fieldbus master, figure 1, element 44) the method comprising: each field device (profibus process automation,

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column 8, lines 51-63) identifying parameters (e.g., figures 20 and 23) of the field device comprised in the description; for each of the parameters (e.g., figures 20 and 23), the field device identifying characteristics relevant for control purposes; and the field device automatically generating executable program modules (columns 5-6, lines 65-67, 1-16, respectively) for the control equipment of the field device, to be executed by the field device's microprocessor (e.g., PLC, column 8, line 48) and which are based, at least partially, on the identified parameters (e.g., figures 20 and 23) and/or the characteristics of the parameters (e.g., figures 20 and 23) which have been identified as relevant for control purposes; wherein the field device measures, positions, records, or regulates an industrial process (suggested that the devices are connected or related to a manufacturing process, column 15, lines 5-20).

Claim 26. A method in accordance with Claim 25, further comprising: generating for at least one parameter (e.g., figures 20 and 23) a declaration module (deals with the relationship of the floating point, column 6, line 10) in the field device, (profibus process automation, column 8, lines 51-63) which reserves for the parameter (e.g., figures 20 and 23) a storage segment of the storage mechanism and/or defines a data type and/or size of the parameter, (e.g., figures 20 and 23) wherein the storage segment is reserved, and the data type and/or the size correspond to the identified characteristics of the parameter(e.g., figures 20 and 23).

Claim 27. A device for generating control modules(columns 5-6, lines 65-67, 1-16, respectively) for field devices, from a machine-readable parameterized description of the field devices, (profibus process automation, column 8, lines 51-63) for use on control units (e.g., fieldbus master, figure 1, element 44)for remote control of field devices, (profibus process automation, column 8, lines 51-63) wherein each of the field devices has control equipment with at least one microprocessor, (e.g., PLC, column 8, line 48) with at least one electronic storage mechanism(e.g., database, column 34, lines 47-50) and with data input (user input, element 74)and output mechanisms(e.g., database, column 34, lines 47-50) for communicating with the control units, the device comprising: input equipment for reading in and storing the description into a field device(profibus process automation, column 8, lines 51-63); a first analysis (user views the parameters of the profibus; profibus, column 8, lines 51-63) facility in the field device for identifying the parameters(e.g., figures 20 and 23) of the field device being in the description; a second analysis (user views the parameters of the profibus; profibus, column 8, lines 51-63) facility in the field device(profibus process automation, column 8, lines 51-63) for identifying the characteristics of the parameters (e.g., figures 20 and 23) defined in the description as relevant for control proposes; and a generation mechanism in the field device(profibus process automation, column 8, lines 51-63) which, for at least one of the parameters(e.g., figures 20 and 23) identified in the first analysis (user views the parameters of the profibus; profibus, column 8, lines 51-63) facility mechanism, generates at least one executable program module(columns 5-6,

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lines 65-67, 1-16, respectively), which can be executed on the field device's (profibus process automation, column 8, lines 51-63) microprocessor; wherein the field device(profibus process automation, column 8, lines 51-63) measures, positions, records, or regulates an industrial process (suggested that the devices are connected or related to a manufacturing process, column 15, lines 5-20).

Claim 28. A device in accordance with Claim 27, wherein the generation mechanism generates: a declaration module in the field device(profibus process automation, column 8, lines 51-63) which, for the parameter concerned, defines a storage segment of the at least one electronic storage mechanism, and a data type, size, and a set of allowed values or an allowed value range for the segment, and an access module in the field device(profibus process automation, column 8, lines 51-63) which, for the parameter concerned, controls accesses by the control equipment to the storage segment defined in the declaration module, (deals with the relationship of the floating point, column 6, line 10) and which instructs the control equipment to execute other program modules when it accesses the parameter.

Section II: Response to Arguments

112/102(Call)

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5. Applicants' arguments, see pages 7-9, filed 7/23/09, with respect to the prior art by Call and the 112 rejections, have been fully considered and are persuasive. The 102 rejection by Call and the 112 rejection has been withdrawn.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure:

- US Patent 5,307,346 discloses a network-field interface.
- US Patent 6,799,148 discloses an electronic mail based remote historian and system.

7. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715.

If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. Albert Decady (571-272-3819). The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Answers to questions regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).

/Thomas H. Stevens/

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/Albert DeCady/

Supervisory Patent Examiner, Art Unit 2121